Remarks

The Office Action dated December 17, 2004 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-10, 12-13, and 16-25 are pending in this application. Claims 1-25 stand rejected.

The rejection of Claim 1 under 35 U.S.C. § 112, second paragraph, is respectfully traversed.

Applicants disagree with the suggestion at page 2 of the Office Action that an energy absorber for attachment to a vehicle for absorbing forces generated in an impact is not shown in the figures and/or lacks support in the specification. Particularly, Applicants direct the Examiner to Figures 1-4 which clearly show an energy absorber are recites in Claim 1. Applicants also direct the Examiner to at least paragraphs [0004] and [0010] for support in the specification.

Further, Applicants disagree with the suggestion that "a molded mat of fiber reinforced resin material, said molded mat having a density of about 600 to about 3000 grams per square meter wherein density is determined by the weight of a square meter of said molded mat" fails to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. As is well established, the second paragraph of Section 112 is essentially a requirement for precision and definiteness of the claim language. If the scope of the subject matter embraced by the claim is clear, and if the applicant has not otherwise indicated that he intends that the claim be of different scope, then the claim does particularly point out and distinctly claim the subject matter which the applicant regards as his invention. See In re Borkowski, 422 F.2d 904, 909, 164 U.S.P.Q. 642, 645-46 (C.C.P.A. 1970). Applicants submit

that for a claim to meet the requirements of Section 112, second paragraph, one skilled in the art must be able to tell with a reasonable degree of certainty whether his conduct is within or outside the scope of the claim. Also, the claim must be directed to the subject matter that the applicant regards as his invention. Consequently, a claim that is understandable to one skilled in the art and that defines the subject matter that the applicant regards as the invention meets the requirements of Section 112, second paragraph.

Applicants respectfully submit that Claim 1 clearly and distinctly claims an energy absorber that comprise a unitary structure "comprising a molded mat of fiber reinforced resin material", and that "said molded mat having a density of about 600 to about 3000 grams per square meter wherein density is determined by the weight of a square meter of said molded mat". Applicants submit that one skilled in the art would understand that Claim 1 recites an energy absorber that comprises a unitary structure that is comprised of a molded mat of fiber reinforced resin material. Applicants submit that one skilled in the art would understand that Claim 1 further recites that the molded mat has a density of about 600 to about 3000 grams per square meter where density is determined by the weight of a square meter of said molded mat. Further, Applicants submit that one skilled in the art upon reading the specification, particularly, paragraph [0011], would understand the scope of the claim and what defines the subject matter that the Applicants regard as the invention. Accordingly, Applicants submit that Claim 1 is definite and meets the requirements of Section 112, second paragraph, by partiularly pointing out and distinctly claiming the subject matter which Applicants regard as their invention.

For the reasons set forth above, Applicants respectfully request that the Section 112, second paragraph, rejection of Claim 1 be withdrawn.

The rejection of Claims 1-10 and 12-25 under 35 U.S.C. § 103(a) as being unpatentable over Evans (US 6,685,243) is respectfully traversed.

Evans describes a bumper system that includes a beam and an energy absorber having a top, bottom, and middle horizontal sections. The top and bottom sections are collapsible with a parallelogram motion that shifts top and bottom portions vertically up or down upon impact.

Claim 1 of the present application recites an energy absorber adapted for attachment to a vehicle for absorbing forces generated from an impact. The "energy absorber comprising a unitary structure comprising a molded mat of fiber reinforced resin material, said molded mat having a density of about 600 to about 3000 grams per square meter wherein density is determined by the weight of a square meter of said molded mat, said structure having a plurality of forwardly projecting crushable lobes adapted to crush upon impact, each said lobe comprising a front portion, a rear portion, and a crush initiator portion between said front and rear portions, said initiator portion comprising a substantially conically shaped portion, said plurality of crushable lobes spaced apart longitudinally across said energy absorber".

Evans does not describe nor suggest an energy absorber as recited in Claim 1. Particularly, Evans does not describe nor suggest an energy absorber that includes a plurality of forward projecting crushable lobes with each lobe "comprising a front portion, a rear portion, and a crush initiator portion between said front and rear portions, said initiator portion comprising a substantially conically shaped portion", and the "plurality of crushable lobes spaced apart longitudinally across said energy absorber". Rather, Evans describes an energy absorber having a top, bottom, and middle horizontal sections. The top and bottom sections are collapsible with a parallelogram motion that shifts top and bottom portions vertically up or down

upon impact. Also, Figures 1-10 of Evans do not show forward projecting crushable lobes having a front portion, a rear portion, and a crush initiator portion between said front and rear portions with the crush initiator portion having a substantially conically shaped portion. The Office Action, at page 4 suggests that Figure 2 of Evans shows a conically shaped portion. Applicants disagree with this suggestion because the crushable horizontal sections of Evans do not have a conical shape. Rather, the horizontal sections of Evans have a substantially rectangular shape. Applicants submit that the energy absorber of Evans is devoid of any crushable lobes with conically shaped portions. Further, the horizontal sections of the Evans energy absorber a spaced apart vertically, and are not spaced apart longitudinally across the energy absorber.

Also, Evans does not describe nor suggest an energy absorber made from a molded mat of fiber reinforced resin material wherein the molded mat has a density of about 600 g/m^2 to about 3000 g/m^2. The Office Action, at page 4 admits that Evans does not disclose "a mat of fiber reinforced resin material; said mat having a density of about 600 to about 3000 grams per square meter wherein density is determined by the weight of a square meter of said molded mat; the energy absorber adapted to absorb energy during an impact of the vehicle; absorber of thermoformed or compression molded material; a low density glass mat thermoplastic composite; fiber reinforcement in a matrix of thermoplastic material; mat comprises a chopped glass fiber and a thermoplastic binder material comprising a polyester resin and polycarbonate".

Applicants submit that it would not have been obvious to an artisan skilled in the art at the time the invention was made to make the energy absorber using a molded mat of fiber reinforced resin material where the molded mat has a density of about 600 g/m^2 to about 3000

g/m^2. As is well established, to establish a *prima facie* case of obviousness, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combine references.

The Office Action, at page 4 suggests that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the energy absorber using a molded mat of fiber reinforced resin material, said molded mat having a density of about 600 to about 3000 grams per square meter wherein density is determined by the weight of a square meter of said molded mat". The Office Action, at page 5, impermissibly uses Applicants' own Detailed Description Of The Invention as support for the claim of obviousness. The Office Action implies that because fiber reinforced mats are commercially available, it would be obvious to use these mats to mold Applicants' claimed energy absorber. Applicants disagree with this assertion because to the best of Applicants' knowledge, mats of fiber reinforced resin material have never been used to form an energy absorber, and the Office Action has not shown that mats of fiber reinforced resin material are typically used to form energy absorbers. Therefore, Applicants submit that it would not be obvious to make the energy absorber of Evans from a molded mat of fiber reinforced resin material where the molded mat has a density of about 600 g/m^2 to about 3000 g/m^2. Also, there has been no showing of motivation to make the Evans energy absorber using a molded mat of fiber reinforced resin material where the molded mat has a density of about 600 g/m^2 to about 3000 g/m^2. It appears that the only motivation comes from Applicants' disclosure. Applicants submit that the energy absorber recited in Claim

1 of the present application includes a novel and non-obvious use of a known material to make the energy absorber.

At least for the reasons set forth above, Applicants respectfully submit that independent Claim 1 is patentable over Evans.

Claims 14 and 15 have been canceled.

Claims 2-10, 12-13, and 16-25 depend from independent Claim 1. When the recitations of dependent Claims 2-10, 12-13, and 16-25 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 2-10, 12-13, and 16-25 likewise are patentable over Evans.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 10 and 12-25 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

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